

HISTORIC PROPERTY INVENTORY FORM

IDENTIFICATION SECTION

Field Site No. 182-N OAHP No. _____ Date Recorded 12-Feb-95
Site Name Historic High Lift Pump House
Common _____
Field Recorder Philip M. Bogen, Evaluator: Darby Stapp
Owner's Name U.S. Department of Energy, Richland Operations Office
Address P.O. Box 550
City/State/Zip Code Richland, WA 99352

Status

- ☒ Survey/Inventory
☐ National Register
☐ State Register
☐ Determined Eligible
☐ Determined Not Eligible
☐ Other (HABS, HAER, NHL)
☐ Local Designation

Photography

Photography Neg. No. 94010643-17cn
(Roll No. & Frame No.)
View of North and East Facades
Date Jan. 1994

Classification ☐ District ☐ Site ☐ Building ☒ Structure ☐ Object
District Status ☒ NR ☐ SR ☐ LR ☐ INV
Contributing ☒ Non-Contributing ☐
District/Thematic Nomination Name Hanford Site Manhattan Project and Cold War Era Historic District

Description Section

Materials & Features/Structural Types

Building Type Industrial
Plan Square
Structural System Concrete Block
No. of Stories 1

Roof Type

☐ Gable ☐ Hip
☒ Flat ☐ Pyramidal
☐ Monitor ☐ Other (specify) _____
☐ Gambrel
☐ Shed

Cladding (exterior Wall Surfaces)

- ☐ Log
☐ Horizontal Wood Siding
Rustic/Drop ☐
Clapboard ☐
☐ Wood Shingle
☐ Board and Batten
☐ Vertical Board
☐ Asbestos/Asphalt
☐ Brick
☐ Stone
☐ Stucco
☐ Terra Cotta
☒ Concrete/Concrete Block
☐ Vinyl/Aluminum Siding
☐ Metal (specify) _____
☐ Other (specify) _____

Roof Material

☐ Wood Shingle
☐ Wood Shake
☐ Composition
☐ Slate
☐ Tar/Built-up
☐ Tile
☐ Metal (specify) _____
☒ Other (specify) Concrete
☐ Not visible

Foundation

☐ Log ☐ Concrete
☐ Post & Pier ☐ Block
☐ Stone ☒ Poured
☐ Brick ☐ Other (specify) _____
☐ Not visible

Integrity

(Include detailed description in

Description of Physical Appearance)

	Intact	Slight	Moderate	Extensive
Changes to plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Changes to windows	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Changes to original cladding	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Changes to interior	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

State of Washington, Department of Community Development
Office of Archaeology and Historic Preservation
111 21st Avenue Southwest, Post Office Box 48343
Olympia, Washington 98504-8343 (206)753-4011

LOCATION SECTION

Address 100-N Reactor Area, Building 182-N
City/Town/County/Zip Code Richland, WA/Benton County/99352
Twp. 14N Range 26E Section 28 1/4 Section NW 1/4 1/4 Sec SE
Tax No./Parcel No. _____ Acreage _____
Quadrangle or map name Coyote Rapids 7.5 min. series
UTM References Zone 11 Easting 303974 Northing 5172485
Plat/Block/Lot _____
Supplemental Map(s) 100-N Area Buildings



High Styles/Forms (Check one or more of the following)

<input type="checkbox"/> Greek Revival	<input type="checkbox"/> Spanish Colonial Revival/Mediterranean
<input type="checkbox"/> Gothic Revival	<input type="checkbox"/> Tudor Revival
<input type="checkbox"/> Italianate	<input type="checkbox"/> Craftsman/Arts & Crafts
<input type="checkbox"/> Second Empire	<input type="checkbox"/> Bungalow
<input type="checkbox"/> Romanesque Revival	<input type="checkbox"/> Prairie Style
<input type="checkbox"/> Stick Style	<input type="checkbox"/> Art Deco/Art Moderne
<input type="checkbox"/> Queen Anne	<input type="checkbox"/> Rustic Style
<input type="checkbox"/> Shingle Style	<input type="checkbox"/> International Style
<input type="checkbox"/> Colonial Revival	<input type="checkbox"/> Northwest Style
<input type="checkbox"/> Beaux Arts/Neoclassical	<input type="checkbox"/> Commercial Vernacular
<input type="checkbox"/> Chicago/Commercial Style	<input type="checkbox"/> Residential Vernacular (see below)
<input type="checkbox"/> American Foursquare	<input checked="" type="checkbox"/> Other (specify) _____
<input type="checkbox"/> Mission Revival	<input type="checkbox"/> Industrial Vernacular

Vernacular House Types

<input type="checkbox"/> Gable Front	<input type="checkbox"/> Cross Gable
<input type="checkbox"/> Gable Front and Wing	<input type="checkbox"/> Pyramidal/Hipped
<input type="checkbox"/> Side Gable	<input type="checkbox"/> Other (specify) _____

NARRATIVE SECTION

Study Unit Themes (check one or more of the following)

- ☐ Agriculture
- ☐ Architecture/Landscape Architecture
- ☐ Arts
- ☐ Commerce
- ☐ Communications
- ☐ Community Planning/Development

- ☐ Conservation
- ☐ Education
- ☐ Entertainment/Recreation
- ☐ Ethnic Heritage (specify) _____
- ☐ Health/Medicine
- ☐ Manufacturing/Industry
- ☐ Military

- ☐ Politics/Government/Law
- ☐ Religion
- ☐ Science & Engineering
- ☐ Social Movements/Organizations
- ☐ Transportation
- ☒ Other (specify) Manhattan Project & Cold War Era
- ☒ **Study Unit Sub-Theme(s) (specify)**
Cold War/Nuclear Fuel Production
Reactor Operations, Water Treatment

Statement of Significance

Date of Construction 1964 Architect/Engineer/Builder United Nuclear

☒ In the opinion of the surveyor, this property appears to meet the criteria of the National Register of Historic Places.

☒ In the opinion of the surveyor, this property is located in a potential historic district (National and/or local).

The circulating raw water system that supplied the normal water requirements of the 100-N Area (non-WPPS facilities) originated at the 181-N River Pump House. Pumps located in the 182-N High Lift Pump House help transfer raw water from the 181-N Building to the 182-N Building, where it enters one of the following water systems:

The **low-pressure raw water supply system** furnishes raw water to the following equipment and locations: high-pressure air compressors and coolers, 182-N high pressure injection pump lube oil coolers and fluid couplings, 182-N auxiliary supply for diesel engine jacket water coolers, 182-N water ejectors, 182-N chlorine equipment, 109-N water treatment facility coolers, 183-N caustic solution heaters, and 108-N and Administration Building services.

The **high-pressure raw water supply pumping system** supplies raw water to the 105-N rupture monitor heat exchangers, pressure to the area fire main, backup to the reactor thermal shield and control rod cooling systems, and other miscellaneous raw water services.

The **filtered water system** in the 182-N Building is composed of two complementary intertied subsystems: a low-pressure pumping system located in the basement and a high-pressure pumping system located on the main floor. The suction supply for these systems originate at the 850,000 gal filtered water storage tank. The low-pressure pumping system was designed to serve low-pressure filtered water requirements for the plant, especially the 163-N Demineralized Water System, and provide normal suction supply water for the high-pressure filtered water pumps. The high-pressure filtered water supply pumping system supplies the normal cooling water for the reactor horizontal control rods.

The **potable water system** supplies the sanitary water requirements of the 100-N Area.

This property is not associated with an important person (Criterion B), does not possess any distinctive architectural features or methods of construction (Criterion C), and does not qualify under Criterion D as the principal source of important information. However, the 182-N Building qualifies under Criterion A due to its association with the Cold War production of plutonium at N Reactor, and its contribution to Reactor Operations, specifically the Water System. Therefore, it is the conclusion of the U.S. Department of Energy that the 182-N Building is eligible under Criterion A for inclusion on the National Register of Historic Places as a contributing property within the Hanford Site Manhattan Project and Cold War Era Historic District.

Description of Physical Appearance

The 182-N Building is a square, one-story, concrete masonry and steel structure with a poured concrete foundation, flat concrete roof, and channeled steel wall. The 182-N Building measures approximately 105 ft by 102 ft (32 m by 31 m); 10,710 ft² (992 m²). On the northwest corner of this structure is a small addition measuring 30 ft by 20 ft (9 m by 6 m) made of the same concrete structural system as the 182-N Building. No significant changes have been made to the 182-N Building.

The N Reactor UTM coordinates are as follows: Northeast corner - 303974E, 5172485N; southeast corner - 303974E, 5171639N; southwest corner - 303069E, 5171639N; northwest corner - 303069E, 5172485N.

Major Bibliographic References

Rollie Warner, Engineer, Columbia Energy & Environmental Services, Inc.

Bechtel Hanford, Inc. 1994. *"Pre-Existing" Conditions Survey of Hanford Site Facilities to be Managed by Bechtel Hanford, Inc.* BHI-00221, Rev. 00, Phase II.

Architectural Cross Sections & Misc. Details, Drawing No. H-1-31363, 1964.